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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,109	09/04/2001	James Arthur Smith	213267US0PCT	2383
22850	7590	10/06/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			JUSKA, CHERYL ANN	
			ART UNIT	PAPER NUMBER

1771

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/926,109	SMITH ET AL.	
	Examiner	Art Unit	
	Cheryl Juska	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 11-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Appeal*

1. In view of the Appeal Brief filed on July 13, 2004, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below, based upon new English language translations of the Japanese primary and secondary references.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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3. Claims 1-3, 7, 8, 11, 12, 14, and 15 are rejected under 35 USC 102(b) as being anticipated by JP 58-152037 assigned to Sumitomo Chemical Co.

Sumitomo '037 discloses a fireproof adhesive backing for carpeting comprising 40-95% of polymer A and 5-60% of polymer B (translation, page 1, section 2). Polymer A is a copolymer of vinyl chloride and ethylene or a terpolymer of vinyl chloride, ethylene, and vinyl acetate. The weight ratio of the components of polymer A is 30-95% vinyl chloride, 5-70% ethylene, and 0-55% vinyl acetate (translation, page 1, section 2). Polymer A may be modified with up to 10 wt. % acrylamide or acrylic acid (translation, page 8, 1<sup>st</sup> paragraph). Polymer B is a synthetic rubber latex, such as a styrene-butadiene copolymer (SBR) or carboxylated SBR (translation, page 8, 2<sup>nd</sup> paragraph). Sumitomo '037 also teaches the adhesive backing is suited for carpets comprising a woven or nonwoven fabric comprised of fibers of polyester or polypropylene (translation, page 6, 2<sup>nd</sup> paragraph). Said adhesive is coated by well-known apparatuses onto the back of a carpet and a secondary backing can be adhered thereto to provide good tuft strength and bonding of said secondary backing (translation, page 10, 1<sup>st</sup> and 3<sup>rd</sup> paragraphs and page 11, 1<sup>st</sup> paragraph). The amount applied is preferably 0.1-2 kg/m<sup>2</sup> (translation, page 10, 1<sup>st</sup> paragraph). The adhesive composition may also include, if necessary, a filler, such as calcium carbonate, or a tackifier, such as polyvinyl alcohol or carboxymethyl cellulose (translation, page 9, 1<sup>st</sup> paragraph). Hence, claims 1-3, 7, 8, 11, 12, 14, and 15 are anticipated by the cited Sumitomo '037 reference.

4. Claims 1-3, 7, 8, 11, 12, 14, 15, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 58-041972 assigned to Sumitomo Chemical Co., Ltd.

Sumitomo '972 discloses a flame-retardant composition for flooring articles comprised of 10-90 parts by weight of polymer A which is a copolymer emulsion of 30-95 wt.% vinyl chloride, 5-70 wt.% ethylene, and 0-55 wt.% vinyl acetate and 10-90 parts by weight of polymer B which is a synthetic rubber latex system (translation, page 2, section 2). The flame-retardant composition is coated onto the backside of a carpet layer of implanted (i.e., tufted) or entangled (i.e., needlepunched) pile fibers and a secondary backing layer of a woven fabric or a film is applied thereto (translation, page 3, 1<sup>st</sup> paragraph). The composition prevents pile fibers from falling out and adds reinforcement to the flooring article (translation, page 3, 1<sup>st</sup> paragraph and page 4, 1<sup>st</sup> paragraph). In other words, the composition is an adhesive backcoat for a carpet, wherein said backcoat provides sufficient tuft bind strength and delamination strength between the primary backing and secondary backing. The flooring article comprises a woven or nonwoven fabric base (i.e., primary backing) of fibers such as polyester or polypropylene (translation, page 6, 1<sup>st</sup> paragraph). Polymer A may be modified with up to 10 wt. % acrylamide or acrylic acid (translation, page 7, 1<sup>st</sup> paragraph). Polymer B is a synthetic rubber latex, such as a styrene-butadiene copolymer (SBR) or carboxylated SBR (translation, page 7, 2<sup>nd</sup> paragraph). The adhesive backcoat composition may also include, if necessary, a filler, such as calcium carbonate, or a tackifier, such as polyvinyl alcohol or carboxymethyl cellulose (translation, paragraph spanning pages 7-8). Said adhesive backcoat is coated by well-known apparatuses onto the back of a carpet and a secondary backing can be adhered thereto to provide good tuft strength and bonding of said secondary backing (translation, paragraph spanning pages 8-9 and page 9, 2<sup>nd</sup> and 3<sup>rd</sup> paragraphs). The amount applied is preferably 0.1-2 kg/m<sup>2</sup> (translation,

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paragraph spanning pages 8-9). Thus, claims 1-3, 7, 8, 11, 12, 14, 15, 18, and 19 are anticipated by the cited Sumitomo '972 reference.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over either the cited Sumitomo '037 or Sumitomo '972 references.

Sumitomo '037 fails to explicitly teach the materials and structure of the secondary backing, while Sumitomo '972 teaches a woven hemp fabric (translation, page 9, 2<sup>nd</sup> paragraph). However, applicant is hereby given Official Notice that secondary backings are commonly made of a woven polypropylene fabric. Hence, it would have been obvious to one skilled in the art to employ a woven polypropylene secondary backing. Therefore, claims 16 and 17 are rejected as being obvious over the prior art.

7. Claim 4 is rejected under 35 USC 103(a) as being unpatentable over either the cited Sumitomo '037 or Sumitomo '972 references in view of US 6,162,848 issued to Lattime et al.

Sumitomo '037 and '972 lack a teaching of the amount of acid employed in the carboxylated SBR. However, said carboxylated SBR's are well known in the latex and carpet arts. For example, Lattime discloses a latex for a carpet backing comprising a carboxylated styrene-butadiene polymer containing 45-74.5 wt. % styrene, 25-50 wt. % butadiene, and 0.5-5

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wt. % of an unsaturated carboxylic acid (col. 2, lines 50-55). Thus, it would have been obvious to one skilled in the art to employ the claimed amount of acid in the carboxylated SBR disclosed by Sumitomo '037 or Sumitomo '972 in order to provide enhanced bond strength of said latex. Therefore, claim 4 is rejected.

8. Claims 5, 6, and 13 are rejected under 35 USC 103(a) as being unpatentable over either the cited Sumitomo '037 or Sumitomo '972 references in view of US 5,851,625 issued to Smesny et al.

Sumitomo '037 and '972 fail to teach the use of a thickener in the inventive latex. However, said use is well known in the latex and carpet arts. Thickeners are added to increase the viscosity so that said latex does not penetrate through to the face fibers of the tufted primary backing. For example, Smesny teaches conventional prior art carpet latexes includes a thickener which is typically polyacrylic acid (col. 7, lines 45-46). Thus, it would have been obvious to one skilled in the art to add a polyacrylic acid thickener in order to adjust the viscosity of the Sumitomo '037 or '972 latexes. Therefore, claims 5, 6, and 13 are rejected over the prior art references.

9. Claims 20 and 21 are rejected under 35 USC 103(a) as being unpatentable over the cited Sumitomo '972 reference.

Claims 20 and 21 limit the amount of polymer A to being less than 10%. Sumitomo '972 teaches polymer A to be present in an amount of 10-90%. However, it would have been obvious to one skilled in the art to employ less than 10% polymer A. Specifically, determining the balance of polymer A and polymer B would be a matter of obtaining the desired properties of the overall latex based upon the amounts of said polymers and the properties that each polymer

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contributes. It has been held that discovering an optimum value of result a effective variables requires only routine skill in the art. *In re Boesch*, 205 USPQ 215. Therefore, claims 20 and 21 are rejected as being obvious over the cited prior art.

10. Claim 13 is rejected under 35 USC 103(a) as being unpatentable over US 5,403,884 issued to Perlinski in view of US 5,851,625 issued to Smesny et al.

Perlinski discloses a process for flocking an elastomeric substrate including the steps of (a) applying an aqueous adhesive comprising 10-100% of an alkaline dispersion of an ethylene carboxylic acid copolymer and 0-90% of an aqueous elastomeric dispersion, (b) applying a flock layer to the adhesive coated substrate, and (c) drying the adhesive (abstract). The ethylene carboxylic acid copolymer, corresponding to applicant's A polymer, comprises ethylene and 1-30% by weight of an ethylenically unsaturated carboxylic acid (col. 1, line 62-col. 2, line 1). The elastomeric dispersion, which corresponds to applicant's B polymer, may be a diene-containing elastomeric polymer, such as carboxylated styrene-butadiene, EPDM, and polybutadiene (col. 5, lines 1-35). The adhesive may optionally include fillers, pigments, and viscosity improvers (i.e., thickeners) (col. 6, lines 11-14). Perlinski teaches the flocked substrate may be suitable for flocked mats and flocked floor coverings (col. 6, lines 65-68).

Thus, Perlinski teaches the invention of claim 13 with the exception of the specified thickener. As discussed above, Smesny teaches conventional prior art carpet latexes includes a thickener, which is typically polyacrylic acid (col. 7, lines 45-46). Thus, it would have been obvious to one skilled in the art to add a polyacrylic acid thickener in order to adjust the viscosity of the Sumitomo latex. Therefore, claim 13 is obvious over the cited Perlinski and Smesny patents.



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11. Claim 21 is rejected under 35 USC 103(a) as being obvious over 5,403,884 issued to Perlinski.

Perlinski discloses the claimed invention with the exception that polymer A is less than 10% by weight. Perlinski teaches said amount ranges from 10-90% by weight. However, it is argued that it would have been obvious to one skilled in the art to employ less than 10% (i.e., 9%), since it has been held that discovering an optimum value of result a effective variables requires only routine skill in the art. *In re Boesch*, 205 USPQ 215. Specifically, determining the balance of polymer A and polymer B would be a matter of obtaining the desired properties of the overall latex based upon the amounts of said polymers and the properties that each polymer contributes. Therefore, claim 21 is rejected over the cited Perlinski reference.

### ***Conclusion***

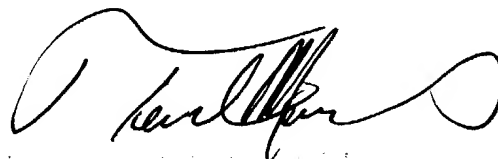
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Juska whose telephone number is 571-272-1477. The examiner can normally be reached on Monday-Friday 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached at 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

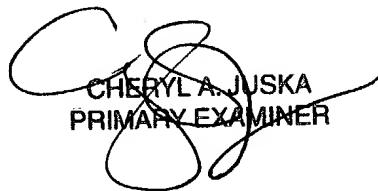
13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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October 4, 2004